

Chemistry Major, Bachelor of Science (60 credit hours)

The study of chemistry introduces students to the world of atoms and molecules and their composition and interactions. This study is recommended for chemistry majors and minors as preparation for graduate school, medical school, secondary-level teaching, or careers in government or industrial laboratories. It is also recommended for physics or biology students to supplement and complement their major fields of study.

Major Requirements:

CHEM 1000 and 2700 do not apply toward the major

Chemistry Core (28 hours):

- CHEM 2110, General Chemistry I, 4 credit hours
- CHEM 2120, General Chemistry II, 4 credit hours
- CHEM 2210, Organic Chemistry I, 4 credit hours
- CHEM 2220, Organic Chemistry II, 4 credit hours
- CHEM 3100, Analytical Chemistry, 4 credit hours
- CHEM 4110, Thermodynamics and Kinetics, 4 credit hours
- CHEM 4510, Senior Physical Science Practicum I, 1 credit hour
- CHEM 4520, Senior Physical Science Practicum II, 1 credit hour
- CHEM 4910, Science Seminar I, 1 credit hour
- CHEM 4920, Science Seminar II, 1 credit hour

Mathematics, Engineering, Physics Core (16 hours)

- PHYS 2240, General Physics I (calculus-based), 4 credit hours
- PHYS 2250, General Physics II (calculus-based), 4 credit hours
- MATH 2010, Calculus I, 4 credit hours
- MATH 2020, Calculus II, 4 credit hours

Electives (16 hours):

- CHEM 3140, Instrumental Chemistry, 4 credit hours
 - CHEM 4090, Inorganic Chemistry, 4 credit hours
 - CHEM 4100, Organic Spectroscopy, 4 credit hours
 - CHEM 4120, Quantum Theory, 4 credit hours
 - CHEM 4210, Biochemistry I, 4 credit hours
 - CHEM 4650, Independent Study, 4 credit hours
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- CHEM 2110, General Chemistry I, is a *Scientific Ways of Knowing* course in the Liberal Arts Program.
 - CHEM 3100, Analytical Chemistry, is a *Writing Intensive* course in the Liberal Arts Program.
 - CHEM 4910/4920, Science Seminar I/II, is both a *Speaking* and *Writing Intensive* course in the Liberal Arts Program.
 - MATH 2010, Calculus I, is a *Quantitative Reasoning* course in the Liberal Arts Program.

NOTE: All students must complete 120 total credit hours to graduate from Anderson University.

Questions? Please contact the [Department of Physical Sciences & Engineering](#).

Proposed 4-year course sequence:

- Freshman: CHEM 2110, MATH 2010; CHEM 2120, MATH 2020
- Sophomore: CHEM 2210, 3100; CHEM 2220, PHYS 2240
- Junior: CHEM Elective, PHYS 2250; CHEM Elective
- Senior: CHEM 4110/4120, 4510, 4910; CHEM 4520, 4920

Chemistry Major 4-Year Suggested Course Sequence

SEMESTER 1		SEMESTER 2	
CHEM 2110	4 Hours	CHEM 2120	4 Hours
MATH 2010	4 Hours	MATH 2020	4 Hours
ENGL 1100/ENGL 1110	3-4 Hours	ENGL 1120	3 Hours
LART 1050	1 Hour	Personal Wellness	2 Hours
COMM 1000	3 Hours	Civic Ways of Knowing	3 Hours

SEMESTER 3		SEMESTER 4	
CHEM 2210	4 Hours	CHEM 2220	4 Hours
CHEM 3100	4 Hours	PHYS 2240	4 Hours
Foreign Language	4 Hours	Aesthetic Ways of Knowing	3 Hours
BIBL 2000	3 Hours	Social & Behavioral Ways of Knowing	3 Hours
Additional Class	3 Hours	Additional Class	3 Hours

SEMESTER 5		SEMESTER 6	
CHEM Elective (3000 or higher)	4 Hours	CHEM Elective (3000 or higher)	4 Hours
CHEM Elective (3000 or higher)	4 Hours	Global/Intercultural Ways of Knowing	3 Hours
PHYS 2250	4 Hours	Additional Class	3 Hours
Additional Class	3 Hours	Additional Class	3 Hours

SEMESTER 7		SEMESTER 8	
CHEM 4110/4120	4 Hours	CHEM Elective (3000 or higher)	4 Hours
CHEM 4510	1 Hour	CHEM 4520	1 Hour
CHEM 4910	1 Hour	CHEM 4920	1 Hour
Christian Ways of Knowing	3 Hours	Additional Class	3 Hours
Civil Discourse & Critical Reasoning	2 Hours	Additional Class	3 Hours
Additional Class	3 Hours	Additional Class	3 Hours

Questions? Please contact the [Department of Physical Sciences & Engineering](#).

Proposed 3-Year Course Sequence:

Freshman: CHEM 2110, MATH 2010; CHEM 2120, MATH 2020, PHYS 2240
 Sophomore: CHEM 2210, 3100, PHYS 2250; CHEM 2220, CHEM Electives
 Junior: CHEM 4110/4120, 4510, 4910; CHEM 4520, 4920, CHEM Electives

Chemistry Major 3-Year Suggested Course Sequence

SEMESTER 1		SEMESTER 2	
CHEM 2110	4 Hours	CHEM 2120	4 Hours
MATH 2010	4 Hours	MATH 2020	4 Hours
ENGL 1100/ENGL 1110	3-4 Hours	PHYS 2240	4 Hours
LART 1050	1 Hour	ENGL 1120	3 Hours
COMM 1000	3 Hours	Civic Ways of Knowing	3 Hours
Social & Behavioral Ways of Knowing	3 Hours		

SUMMER 1	
Additional Class	9 Hours

SEMESTER 3		SEMESTER 4	
CHEM 2210	4 Hours	CHEM 2220	4 Hours
PHYS 2250	4 Hours	CHEM Elective (3000 or higher)	4 Hours
CHEM 3100	4 Hours	CHEM Elective (3000 or higher)	4 Hours
Foreign Language	4 Hours	Aesthetic Ways of Knowing	3 Hours
Personal Wellness	2 Hour	Global/Intercultural Ways of Knowing	3 Hours

SUMMER 2	
Additional Class	9 Hours

SEMESTER 5		SEMESTER 6	
CHEM 4110 or 4120	4 Hours	CHEM 4520	1 Hour
CHEM 4510	1 Hour	CHEM 4920	1 Hour
CHEM 4910	1 Hour	CHEM Elective (3000 or higher)	4 Hours
CHEM Elective (3000 or higher)	4 Hours	Christian Ways of Knowing	3 Hours
BIBL 2000	3 Hours	Additional Class	3 Hours
Additional Class	3 Hours	Additional Class	3 Hours
Additional Class	3 Hours		

Some Liberal Arts Curriculum will have to be taken during the Summer semesters.

Questions? Please contact the [Department of Physical Sciences & Engineering](#).